Nov. 24, 1942. D. E. PRIEST ET AL 2,302,954

METHOD OF MAKING BIT BRACE SWEEPS OR FRAMES

Original Filed Nov. 10, 1939 2 Sheets-Sheet 1

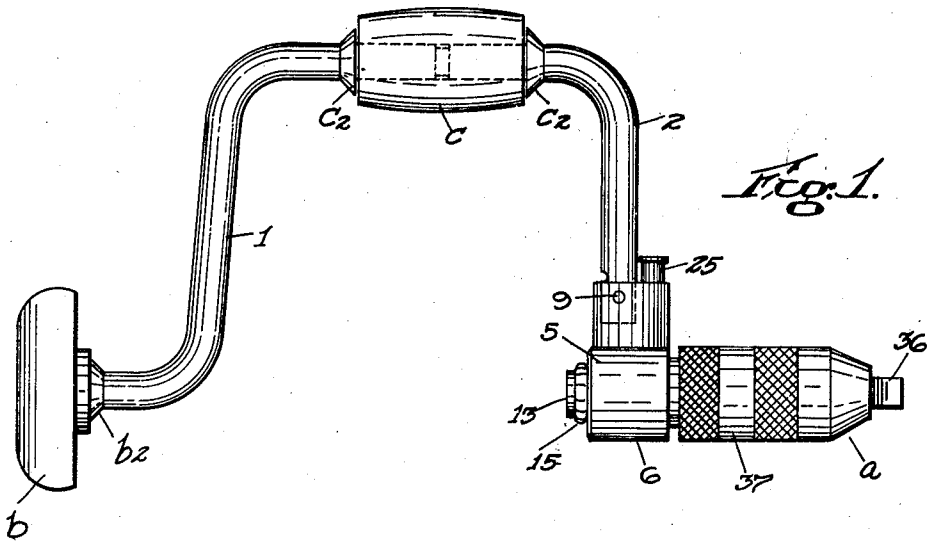


Fig. 1.

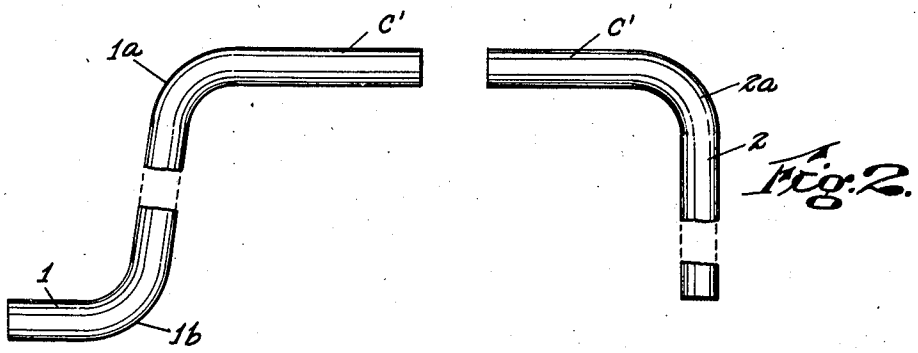


Fig. 2.

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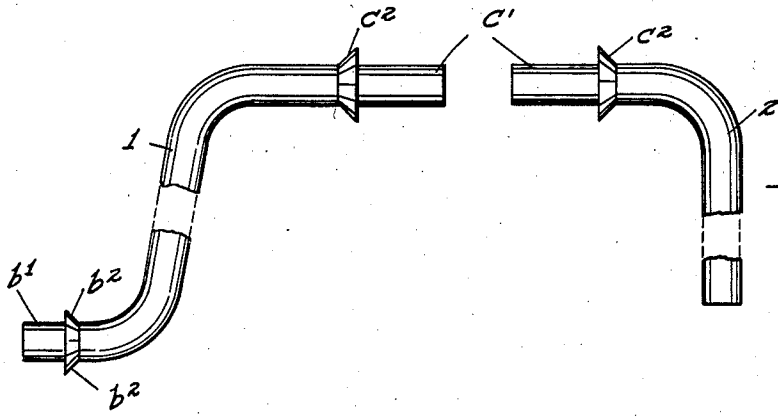


Fig. 3.

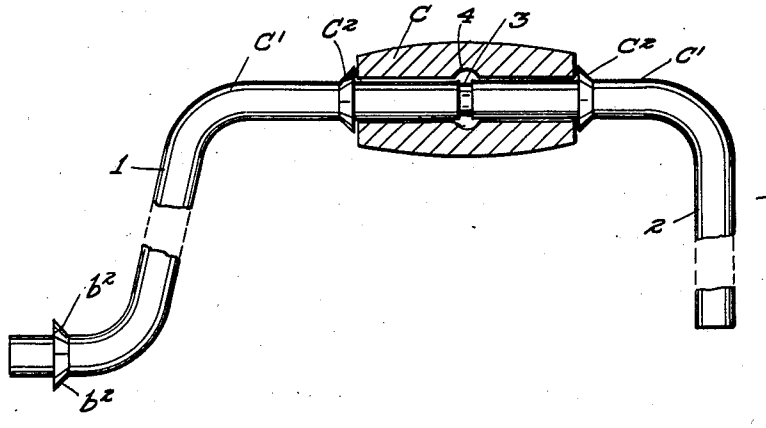


Fig. 4.

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UNITED STATES PATENT OFFICE

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METHOD OF MAKING BIT BRACE SWEEPS OR FRAMES

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Original application November 10, 1939, Serial No. 303,861. Divided and this application November 4, 1940, Serial No. 364,200

1 Claim. (Cl. 29—148)

This invention relates to a novel construction and mode of manufacture for the frames or sweeps of bit braces—the present application being a division of our joint copending application Serial No. 303,861, filed November 10, 1939.

According to our invention, the cost of manufacture for the frame or sweep of a bit brace is very materially reduced, and the assembly on the crank portion of the usual turnable handle, between suitable thrust collars, is greatly facilitated. Other and further objects and advantages of our invention will be made apparent by the following detailed description thereof, taken in connection with the accompanying drawings, in which—

Fig. 1 is a view in side elevation, showing a bit brace of the ratcheting type, having a frame or sweep constructed in accordance with our invention.

Figs. 2, 3 and 4 illustrate successive steps, according to our invention, in the manufacture of the frame and in the assembly thereon of its handle.

Like reference characters refer to like parts in the different figures.

Heretofore, in the manufacture of bit braces, it has been customary to make the frame or sweep from a single piece of round rod stock, appropriately bent between its ends to provide an offset or crank portion. On one of said ends is secured a chuck assembly as indicated at *a*, Fig. 1, while on the other end is journalled, in axial alinement with said chuck assembly, a terminal knob such as indicated at *b*, Fig. 1. The offset or crank portion of the frame must be provided with a turnable handle, such as indicated at *c*, Fig. 1; thus in the usual manufacture of such a frame not only must the handle *c* be positioned on the stock prior to bending of the same, but, in addition, this construction requires the attachment to said offset frame portion of two separate spaced thrust collars for limiting the endwise movement of handle *c*; these collars, as parts separate from the frame material, have to be positioned and held in place by suitable operations such as winging, squeezing, or the like.

Our invention overcomes these complications and difficulties in the manufacture of frames or sweeps for bit braces in the manner illustrated by Figs. 2 to 4 inclusive. As shown in Fig. 2, the round rod stock for such a frame or sweep is provided, not in the usual single piece that requires the attachment of separate thrust collars, but rather in two pieces, designated **1** and **2** respectively, the piece **1** being appropriately bent at *1a* and *1b* to provide the upper portion of the frame which carires the knob *b*, and the piece **2** being appropriately bent as at *2a* to provide the lower portion of the frame which carries the chuck. Inwardly of their bends *1a* and *2a* the pieces provide the short extensions *c'*, *c'* which, according to our invention, cooperate to form the offset or crank portion of the frame whereon is mounted the handle *c*.

As shown in Fig. 3, the pieces **1** and **2** in the manufacture of our improved frame are subjected to suitable heading operations, by which to throw up in spaced relation to the ends of each extension *c'* the integral shoulders or collars c^2, c^2.

These integral shoulders c^2, c^2 do away with any need for providing, assembling and securing on the stock of the frame the separate thrust collars which have heretofore been necessary in frame constructions for bit braces. As shown in Fig. 4, after these heading operations, the portions *c'*, *c'* with the handle *c* loosely encircling one of them are brought into alinement for butt welding, preferably with a small metal disc **3** secured to one of them. The bore of handle *c* opposite the disc **3** is preferably enlarged or relieved as shown at **4**, Fig. 4, whereby the weld flash is prevented from burning the wood or other material of said handle. In this way, according to our invention, the handle is permanently positioned on the crank or offset of the frame between its two integral shoulders c^2, c^2 by the act of welding together the ends of the alined sections *c'*, *c'*.

We claim:

In the manufacture, from rod stock of bit brace sweeps or frames, each with an intermediate offset or crank portion adapted to be encircled by a hollow handle, the improvement which consists in providing the stock for each frame in two separate pieces adapted later to be joined at their opposed ends, striking up on each piece an enlargement or shoulder which is spaced from said end of the piece by approximately one-half the length of said handle, then inserting said ends in said handle from the opposite extremities thereof to abut each other, and finally, with said handle thus positioned between said shoulders and encircling said opposed ends, welding the latter together.

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